

LISTING OF THE CLAIMS

The following listing of claims replaces all prior versions.

1. **(CURRENTLY AMENDED)** An optical pick-up apparatus [[using a holographic optical element,]] comprising:

an optical pick-up package with two openings, and including a light emitting element fixedly located on the package, said light emitting element having three [[lightsources module]] lightsource modules emitting three beams with different wavelengths;

a multiplexed holographic optical element fixedly located on the package and positioned exterior to a first of said openings, said optical element being provided with three holographic gratings for receiving beams reflected from an optical disc and diffracting the received beams according to wavelengths of the received beams; and

a light receiving element, positioned exterior to a second of said openings, for receiving beams that are diffracted while passing through the multiplexed holographic optical element, said light receiving element being externally independently movable.

2. **(ORIGINAL)** The apparatus according to claim 1, wherein the three holographic gratings of the multiplexed holographic optical element are formed on a same surface of a single substrate.

3. **(ORIGINAL)** The apparatus according to claim 1, wherein the three holographic gratings of the multiplexed holographic optical element are arranged in layers.

4. (ORIGINAL) The apparatus according to claim 3, wherein the multiplexed holographic optical element comprises:

- a transparent substrate on which a first holographic grating is formed;
- a first transparent layer on which a second holographic grating is formed; and
- a second transparent layer on which a third holographic grating is formed.

5. (ORIGINAL) The apparatus according to claim 4, wherein the first to third holographic gratings are formed so that their grating depths are different from each other.

6. (ORIGINAL) The apparatus according to claim 5, wherein a grating depth of the first holographic grating is formed to be one of 1.2~1.3 mm, 1.5~1.6 mm, or 2.2~2.4 mm, a grating depth of the second holographic grating is formed to be one of 1.2~1.3 mm, 1.5~1.6 mm, or 2.2~2.4 mm except the grating depth of the first holographic grating, and a grating depth of the third holographic grating is formed to be one of 1.2~1.3 mm, 1.5~1.6 mm, or 2.2~2.4 mm except the grating depths of the first and second holographic gratings.

7. (ORIGINAL) The apparatus according to any of 1 to 3 claims, wherein the multiplexed holographic optical element further comprises a diffraction grating that diffracts a beam emitted from the light emitting element to be divided into a 0 order beam, a +1 order beam and a -1 order beam.

8. (PREVIOUSLY AMENDED) The apparatus according to claim 1, wherein the light emitting element and the multiplexed holographic optical element are fixedly located on a single package, and the light receiving element is located in a lower portion of the package.

9. **(ORIGINAL)** The apparatus according to claim 1, wherein the light emitting element emits three beams having wavelengths of 650 nm, 780 nm and 405 nm, respectively.

10. **(CURRENTLY AMENDED)** An optical pick-up apparatus [[using a holographic element,]] comprising:

a package having two openings, and including a light emitting element fixedly located on the package, said light emitting element having a lightsource module emitting at least three beams with different wavelengths, a multiplexed holographic optical element fixedly located on the package, over a first of said openings formed in an upper portion of the package, having a diffraction grating that divides a beam emitted from the light emitting element into three beams and at least three holographic gratings receiving beams reflected from an optical disc and diffracting the received beams according to wavelengths of the received beams, and a light receiving element, positioned at second of said openings, outside of the package, and externally independently movable, for receiving beams that are diffracted while passing through the multiplexed holographic optical element;

an object lens for collecting beams on a track of the optical disc; and

a collimator lens.

11. **(ORIGINAL)** The apparatus according to claim 10, wherein the multiplexed holographic optical element is fixedly located over an opening formed in an upper portion of the package, and the light receiving element is movably located directly under an opening formed on a lower portion of the package.

12. (ORIGINAL) The apparatus according to claim 11, wherein the light receiving element is located outside the package to be independently movable.

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